



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/403,543 10/25/99 SHIMODA

T 104270

EXAMINER

MM91/0629

OLIFF & BERRIDGE  
PO BOX 19928  
ALEXANDRIA VA 22320

FORDE, R  
ART UNIT

PAPER NUMBER

2826  
DATE MAILED:

06/29/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>	Application No. 09/403,543	Applicant(s) SHIMODA ET AL.	
	Examiner Remmon R. Fordé	Art Unit 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 April 2001.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11 and 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- |   |  |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 16) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)              | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> . | 20) <input type="checkbox"/> Other:  |

## **DETAILED ACTION**

### ***Response To Election Of Species***

Applicant's provisional election with traverse of Species 1, Figures 9-17, claims 1-10 and 12-14 in Paper No. 8 is acknowledged. The traversal is on the ground(s) that all species could be searched together without undue additional effort by the examiner and that the election of species requirement does not conform to the MPEP. This is not found persuasive because there still is an undue burden on the examiner as pointed out in Paper No. 7 and the election of species requirement does conform with the relevant sections in the MPEP.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-9 and 12-14 rejected under 35 U.S.C. 102(e) as being anticipated by Zavracky et al..

Regarding claims 1-3, referring to Figure 1 and Figure 4A, Zavracky et al. discloses a three-dimensional device comprising: a plurality of thin film device layers (100,200) deposited in a thickness direction on a base/first substrate (220), wherein each thin film device layer constitutes a circuit (408,410,412) disposed in a predetermined region extending in a planar direction.

Regarding claims 8 and 9, referring to Figure 1 and Figure 4A, Zavracky et al. further discloses that each thin film device layer comprise connecting electrodes (418,420,422) electrically connecting two adjacent thin film device layers (100,200) to each other, wherein the connecting electrodes being provided on both surfaces of each thin film device layer.

Regarding claim 13, referring to Figure 1 and Figure 4A, Zavracky et al. further discloses that at least one of the thin film device layers (200) comprise a plurality of thin film transistors (408,410).

Regarding claim 14, referring to Figure 1, Zavracky et al. further discloses that at least one of the thin film device layers (100) comprise a memory cell array (108).

Applicant's claims 1-7 and 12 do not distinguish over the Zavracky et al. reference regardless of the process used to transfer at least one of the thin film device layers, because only the final product is relevant, not the process of making such as depositing by a transfer method.

Note that a "product by process" claim is directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In*

Art Unit: 2826

re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); and In re Marosi et al., 218 USPQ 289, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear. See also MPEP 706.03(e).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zavracky et al. in view of Yoshizawa et al..

Referring to Figure 1 and Figure 4A, Zavracky et al. discloses a three-dimensional device comprising: a plurality of thin film device layers (100,200) deposited in a thickness direction on a base/first substrate (220), wherein each thin film device layer constitutes a circuit (408,410,412) disposed in a predetermined region extending in a planar direction. Zavracky et al. further discloses that each thin film device layer comprise connecting electrodes (418,420,422) electrically connecting two adjacent thin film device layers (100,200) to each other.

Zavracky et al. fails to disclose that an anisotropic conductive film joins the two adjacent thin film device layers.

Referring to Figure 20A and Figure 20B, Yoshizawa et al. discloses that it is very well known in the art to use an anisotropic conductive film (21) to join two device layers (100,110) due to its unique conducting properties (i.e. lowering of electrical resistance value by contacting the adjacent metal particles by compression). (Column 6, lines 4-16)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an anisotropic conductive film as disclosed by Yoshizawa et al. between the two adjacent thin film device layers as disclosed by Zavracky et al. for electrically joining the two adjacent thin film device layers due to the very well known and unique conducting characteristics of anisotropic conductive film as disclosed by Yoshizawa et al..

#### ***Relevant Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Akiyama and Zavracky et al. (US 5,736,768) each disclose layered thin film devices.

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Remmon R. Fordé whose telephone number is (703) 305-4533. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-5841 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Remmon R. Fordé  
June 20, 2001



**Nathan Flynn**  
**Primary Examiner**